

AUTHORS: Bartenev, G. M., Tsepkov, L. P. SOV/20-121-2-18/53

TITLE: The Scale Factor and the Strength of Glass (Masshtabnyy faktor i prochnost' stekla)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 121, Nr 2, pp. 260 - 263 (USSR)

ABSTRACT: The purpose of the present paper is an investigation of the scale effect under different experimental conditions and with different samples. By scale effect the influence of the dimensions of the working parts of a sample or a product on its strength is meant. This effect is most distinctly marked in brittle material, as e.g. silicate glass. Experience has shown that the strength of glass practically only depends on the strength of the surface. At first the authors briefly discuss a few previous papers (Refs 1-6) which in the description of the influence of the scale factor on the strength of glass arrived at contradicting results. In the following at first the strength of a glass fibre and then different bending and stretching experiments with glass samples are discussed. The strength of a fibre only depends on the coefficient of expansion  $\alpha$ , but not on the diameter of the

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The Scale Factor and the Strength of Glass

SOV/20-121-2-18/53

fibre. For  $\alpha$  it is valid  $\alpha = 1 + \epsilon_{pl}$ , where  $\epsilon_{pl}$  is the value of the plastic deformation in the production. The crack resistance does not change by changing the diameter of a fibre (if  $\alpha = \text{const}$ ). Bending and stretching experiments with glass plates provided the following results: 1) The strength does not change with the thickness; 2) Glass, investigated by the method of vertical stretching, shows an influence of the thickness on the surface condition: The thicker the glass, the lower will be the strength of its surface. In figures the tables show the results of bending and stretching experiments (transverse and symmetrical bending). It becomes evident that the influence of internal tensions can be neglected as long as these are small. There are 4 figures and 9 references, which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut stekla (All-Union Scientific Research Institute for Glass)

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The Scale Factor and the Strength of Glass

SOV/20-121-2-18/53

PRESENTED: January 13, 1958, by P.A.Rebinder, Member, Academy of  
Sciences, USSR

SUBMITTED: January 9, 1958

Card 3/3



VITMAN, F.F.; BARTENEV, G.M.; PUKH, V.P.; TSEPKOV, L.P.

Method of measuring the strength of sheet glass. Stek. 1 ker.  
19 no.8:9-11 Ag '62. (MIRA 15:9)  
(Glass--Testing)



TSEPROV, L.P.; BARTENEV, G.M.

Determination of elasticity constants of glass by means of  
wire strain gauges. Zav.lab. 28 no.6:731-732 '62. (MIRA 15:5)

1. Gosudarstvennyy institut stekla.  
(Glass-Testing)  
(Elasticity)



S/032/62/028/006/021/025  
B108/B104

AUTHORS: Tsepkov, L. P., and Bartenev, G. M.

TITLE: Determination of the elastic constants of glass by means of strain gages

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 6, 1962, 731-732

TEXT: A method of determining the Young modulus and Poisson's ratio of glasses and crystalline glasses is presented. Strain gages are glued to two standard specimens and connected to an electronic tensiometer. One of the specimens is symmetrically loaded on two sites. The Young modulus can then be found from the difference in tensiometer readings on the loaded and unloaded specimen. Poisson's ratio can be found in a similar way. Results are in good agreement with those obtained by other methods. There are 2 figures and 1 table.

ASSOCIATION: Gosudarstvennyy institut stekla (State Institute of Glass)

Card 1/1



BARTENEV, G.M.; TSEPKOV, L.P.

Nature of the scale effect of ice. Zav.lab. 26 no.3:330-331 '60.  
(MIRA 13'6)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut stekla.  
(Strength of materials)  
(Ice--Testing)



05273  
SOV/170-59-7-4/20

24(6)

AUTHORS:

Bartenev, G.M., Tsapkov, L.P.

TITLE:

On Testing Strength of Glass

PERIODICAL:

Inzhenerno-fizicheskiy zhurnal, 1959, Nr 7, pp 20 - 28 (USSR)

ABSTRACT:

Inorganic glass is an ideal material for checking the theory of elasticity. The methods of testing which have been applied so far are, however, not very well substantiated, and the data available in literature are contradictory. The authors analyzed the tests of flat glass for transverse and symmetrical bending under static loads. The checking of formulae of the material strength theory for transverse bending was made by Frokht, Koker and Faylon [Refs 9,10] on glass specimens of the beam type. However, according to N.M. Belyayev, when the ratio of beam thickness to its span  $d/L < 1/5$ , it works as a plate, and calculation conditions should be changed. The authors carried out tests of both rigid and elastic glass plates, and the results are compiled in Table 2. A conclusion drawn from these tests is as follows: formulae applied for calculating the strength and the magnitude of arising stresses in tests for transverse bending, hold for rigid and elastic plates, provided that deflections do not exceed the thickness of the plate. The tests for symmetric bending

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On Testing Strength of Glass

were carried out to determine the strength of the surface of glass plates. A series of tests with a freely supported plate on a square and on a round support, subjected to a load concentrated in the center, were performed. For the case of a square plate on a square support there are 3 different formulae proposed by Timoshenko [Ref 11], Roark [Ref 14] and Markus [Ref 15]. As can be seen from the results of tests of a square plate with a square support, presented in Figure 2, Markus' formula holds with an accuracy of  $\pm 10\%$  for the plates in which  $D < 1/6 a$ , where  $D$  is the diameter of the drill core, and  $a$  is the side of the square support. At  $D > 1/6 a$ , Roark's formula yields better results. For the case of a round plate on a round support, best results are yielded by Formula 7, proposed by Timoshenko, provided that  $D > 1/4 a$ . The authors investigated, moreover, an effect of the edges in tests for symmetrical bending. Their conclusion is that the edges should extend by 1 to 2  $d$  beyond the support. The shape of the plate should correspond to the contour of the support. In the conclusion the authors thank S.N. Zhurkov, Corresponding Member AS USSR for discussing the present in-

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On Testing Strength of Glass

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vestigation.

There are: 2 graphs, 1 diagram, 1 photo, 4 tables and 18 references, 12 of which are Soviet, 4 English, 1 French and 1 German.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut stekla (State Scientific Research Institute for Glass), Moscow.

Card 3/3



TSEPKOV, N., inzh.

Conference on introducing strata bolting in mines. Bezop.  
truda v prom. 4 no.8:36-38 Ag '60. (MIRA 13:8)  
(Mine roof bolting--Congresses)



TSEPKOVA, N. A.

MASHKOVTSSEV, V.F.; TSEPKOVA, N.A.; MOISEYEVA, M.Ye.

Destruction of nicotine by tobacco plants autolysis and deficiency metabolism. Dokl.AN SSSR 98 no.3:491-494 S '54. (MLRA 7:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tabaka i makhorki im. A.I.Mikayana, Krasnodar.

(PLANTS,

tobacco, nicotine destruction)

(NICOTINE, metabolism,

tobacco plant, destruction)



TSEPLA, A.K.

Penetrating skull wound from a nail. Sud.-med.ekspert. 5 no.4:52-  
53 O-D '62. (MIRA 15:11)

1. Kafedra sudebnoy meditsiny (zav. - dotsent I.I.Naynis)  
Kaunasskogo meditsinskogo instituta.  
(SKULL—WOUNDS AND INJURIES)



S/169/60/000/006/019/021  
A005/A001

Translation from: Referativnyy zhurnal, Geofizika, 1960, No. 6, p. 182, # 6777

AUTHORS: Tseplekha, Z., Raykhl', Ya., Segnal, L.

TITLE: The New Czechoslovakian Meteorite "Lugi"

PERIODICAL: Astron. tsirkulyar, 1959, 18 iyunya, No. 203, p. 17

TEXT: On April 7, 1959, at 19<sup>h</sup>30<sup>m</sup>(Ut), a bolide was observed in the western part of Czechoslovakia, which caused 50 - 100 lux illumination intensity at a distance of 50 km. The velocity (20 km/sec), the inclination of the trajectory with respect to the earth's surface (43°), and the projection of the trajectory (at a distance of about 300 m from the projection of the detonation point) were determined from photographs. Not far from the village of Lugi, the meteorite of 4.5 kg weight was found.

Translator's note: This is the full translation of the original Russian abstract.

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TSEPKOV, S.V., inzhener.

Maintenance of the Moscow-Moginsk highway. Avt.dor. 20 no.3:14-15  
Mr '57. (MLRA 10:5)

(Roads--Maintenance and repair)



S/035/60/000/006/029/038  
A001/A001

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 6,  
p. 67, # 5332

AUTHORS: Tseplekha, Z., Raykhl', Ya. Segnal, L.

TITLE: New Czechoslovakian Meteorite "Lugi"

PERIODICAL: Astron. tsirkulyar, 1959, iyunya 18, No. 203, p. 17

TEXT: On April 7, 1959, at 19<sup>h</sup>30<sup>m</sup> Universal time, a very bright bolide was observed in the western part of Czechoslovakia. The trajectory of the bolide flight was determined from the photographic and visual observations and was projected on the ground surface. A stone meteorite weighing 4.5 kg was found in 300 m from the spot of explosion (not far from the village of Lugi).

N. P. K.

Translator's note: This is the full translation of the original Russian abstract.

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TSEPLEV, N.S.; KRAYNIKOVA, Z.V.

Chemical cleaning of driers. Lit. proizv. no.5:41 My '62. (MIRA 16:3)  
(Drying apparatus—Cleaning)



L 40249-66 EWT(1)/T IJP(c) JGS/GM

ACC NR: AT6020808

SOURCE CODE: UR/2534/65/000/026/0119/0131

AUTHOR: Tseplekha, Z.; Raykhl', Ya.

ORG: Astronomical Institute of the Czechoslovak Academy of Sciences, Ondr  
Czechoslovakia (Astronomicheskiy institut Chekhoslovatskoy Akademii nauk)

TITLE: Program of photographing bright bolides by cameras with a 180 degree field of view  
in Czechoslovakia

SOURCE: AN SSSR. Komitet po meteoritam. Meteoritika, no. 26, 1965, 119-131

TOPIC TAGS: meteor, meteorite, astronomic camera, wide field camera, stellar photography,  
*METEOR TRAIL*

ABSTRACT: In this article the authors discuss the introduction of a new program of systematic photographing of bolides in Czechoslovakia which was recommended by the International Astronomical Union. The main purpose of the bolide program is to determine the trajectories and orbits of large meteors which can reach the earth's surface as meteorites. Furthermore, systematic material containing accurate data on the orbits of bright bolides will be obtained. Photographing of the trajectory of a bright bolide improves the possibility of finding the meteorite. It has been established that the probability of finding a meteorite in a given region as a result of photographing the trajectory of the bolide is increased approximately by 25%.

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L 40249-66

ACC NR: AT6020808

By establishing a network of stations one bolide accompanying the fall of a meteorite can probably be successfully photographed in Czechoslovakia. The authors describe the "all-sky" camera to be used in the program. A map of Czechoslovakia indicates the 24 places where the cameras are situated for photographing the entire sky. In citing the results of using the all-sky camera system the author indicates that the brightest bolide which has been photographed so far was a bolide with a stellar magnitude of 11 recorded on October 19, 1963. The results of analyzing the photographs of this bolide are given in tabular form. The authors also describe the method of reducing the photographic films. Orig. art. has: 8 tables, 7 figures, and 27 formulas.

SUB CODE: 03,14/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 002

Card 2/2 *MLP*



AKISHIN, A.I.; TSEPLYAYEV, L.I.

Secondary-electron multiplier for micrometeor recording.

Geomag. i aer. 4 no.1:202-205 Ja-F'64. (MIRA 17:2)

1. Moskovskiy gosudarstvennyy universitet.



KISHIN, A.I.; VASIL'YEV, S.S.; TULINOV, A.F.; TSEPLYAYEV, L.I.

Recording of neutral atoms having an energy of 50 - 500 ev. Izv.  
AN SSSR. Ser. fiz. 28 no.1:138-140 Ja '64. (MIRA 17:1)



ACCESSION NR: AP4013153

S/0203/64/004/001/0202/0205

AUTHORS: Akishin, A. I.; Tseplovayev, L. I.

TITLE: Secondary emission multiplier for recording micrometeors

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 1, 1964, 202-205

TOPIC TAGS: secondary emission, secondary emission multiplier, micrometeor, current pulse, electron, electron pulse, hemispherical cathode, scintillation counter

ABSTRACT: Various detectors are now being used to record micrometeors, the most sensitive being the scintillation counter, but the sensitivity of this instrument may be reduced in time by damage from the micrometeors and from corpuscular and electromagnetic radiation. Pressure-sensitive detectors (piezoelectric pickups) cannot record micrometeors that have a mass less than  $10^{-9}$ - $10^{-10}$  g. The authors consider the possibility of a specially designed secondary-emission multiplier, with a large hemispherical cathode and an open entrance, which may record masses smaller than  $10^{-10}$  g. They examine the parameters of such a device on the basis of a model study. They compute (roughly) that the emission at the moment of impact of an iron micrometeor having a mass of  $10^{-13}$  g and a velocity of 45 km/sec will give an

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ACCESSION NR: AP4013153

electron pulse of  $\approx 10^5$ - $10^6$  electrons for an interval of  $10^{-8}$  seconds. If the micrometeor is considered to be a cloud of individual atoms, the kinetic energy of each would be about 750 ev, and this would exceed the energy of the interatomic bond almost a hundredfold. The authors conclude that a hemispherical cathode of large diameter may be used for reliable recording of the pulse of an electron beam that may be hundreds or thousands of times weaker than expected in the recording of micrometeors. Tests on the multiplier during simultaneous transmission of current pulses to the cathode and imposition of a steady charge (imitating the cosmic background) have shown that the device permits reliable separation of current pulses lasting 1 microsecond against the steady background. "The authors thank S. S. Vasil'yev for his support of this work." Orig. art. has: 3 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University); Institut yadernoy fiziki (Institute of Nuclear Physics)

SUBMITTED: 18Jul63

DATE ACQ: 02Mar64

ENCL: 00

SUB CODE: AS, PH

NO RIF SOV: 006

OTHER: 002

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<sup>Y</sup>  
TSEPLIAEV, M. V.

Nekotorye voprosy mekhanizatsii i avtomatizatsii potochnogo proizvodstva; pod red.  
A. V. Khramogo. (Moskva) Moskovskii rabochii, 1948. 246 p. illus.

Bibliography: p. 240-(243).

(Certain problems of mechanization and automatic performance of the assembly-  
line production.)

DLC: TJ1390.T8.

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of  
Congress, 1953.



TSEPLIAEV, M.V.

Nekotorye voprosy mekhanizatsii i avtomatizatsii potochnogo proizvodstva; pod red. A.V. Khramogo. (Moskva) Moskovskii rabochii, 1948. 246 p. illus

Bibliography: p.240-(243)

Certain problems of mechanization and automatization of the assembly-line production.

DLC: TJL390. T8

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.



Tsepliyev, M. V.  
TSEPLIYEV, M. V.

Nekotorye voprosy mekhanizatsii i avtomatizatsii potochnogo proizvodstva. Several problems of mechanization and automatization of assembly line production. Moskva. Moskovskii rabochii, 1948. 246 p. (49-29780)

TJ1390.T8

1. Conveying machinery.

65769



TSEPLITE, R. K.

Result of the use of thiophosphoramide in clinical conditions. Vop.  
klin. lech. zlok. novoobraz. 7:171-178 '61.

1. Respublikanskaya klinicheskaya bol'nitsa im. P. I. Stradynya  
(glavnyy vrach, L. G. Shcherbakova).

(ANTINEOPLASTIC AGENTS ther)



TSEPLITE, R.K., REINKHOIDE, I.K.

Clinical value of determination of third fraction of blood coagulation in cancer. Vopr.klin.lech.zlok. novoobraz., Riga. 2:49-52 1955

1. Sektor onkologii (zav. prof. doktor P.I. Stradyn') Institut eksperimental'noy meditsiny AN Latvyskoy SSR (dir. prof. doktor P.I. Gerke).

(NEOPLASMS, blood in,  
blood coagulation third fraction (Rus))  
(BLOOD COAGULATION,  
third fraction in cancer (Rus))



STRADYN', P.I., prof., TSEPLITE, R.K. (Riga)

Treatment of oncological patients with thiophosphoramides;  
preliminary report. Klin.med. 36 no.7:135-137 J1 '58 (MIRA 11:11)

1. Iz kliniki fakul'tetskoy khirurgii (zav. - prof. P.I. Stradyn')  
Rizhskogo meditsinskogo instituta (dir. - chlen-korrespondent AMN  
SSSR E.M. Burtniyek) i Instituta organicheskogo sinteza AN Latviyskoy  
SSR (dir. - chlen-korrespondent AN Latviyskoy SSR S.A. Giller).  
(CYTOTOXIC DRUGS, ther. use  
tris (1-aziridinyl)-phosphine sulfide in cancer (Rus))



USSR / General Problems of Pathology. Tumors. Metabolism.

U-5

Abs Jour : Ref Zhur - Biol., No. 10, 1958, No: 46837

Author : ~~Tseplite, R. K.~~

Inst : Institute of Experimental Medicine, Academy of Sciences  
Latvian SSR.

Title : Changes of the Bromine Level in the Blood of Cancer  
Patients.

Orig Pub : Tr. In-ta eksperiment. med. AN LatvSSR, 1956, 10, 167-176.

Abstract : The average Br content in the blood of 56 healthy average  
was found to be 493.2  $\gamma$  percent. In stomach cancers the  
average Br content increases to 1,002  $\gamma$  percent, while  
in cancers of the rectum and of the mammary gland (MG)  
it averages 859 and 895  $\gamma$  percent. In ulcers of the  
stomach and of the duodenum, in stomach polyposis and in  
antacid gastritis, the Br content is almost normal. Roent-  
gentherapy of MG decreased Br concentration by 7 percent.

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NEMIRO, Ye.A. (Riga, ul. Lenina, d.138, kv.23); TSEPLITE, R.K. (Riga, ul. Palasta, d.8, kv.4)

A rare form of peripheral lung cancer [with summary in English].  
Vop.onk. 3 no.6:740-742 '57. (MIRA 11:2)

1. Iz Rzhskogo mezhrayonnogo onkologicheskogo dispansera (glav. vrach - A.P.Bezverkhaya) i kliniki fakul'tetskoy khirurgii (zav. - chlen-korrespondent AMN SSSR prof. P.I.Stradyn') Rzhskogo meditsinskogo instituta dir. - chlen-korrespondent AMN SSSR prof. E.M. Burtniyek)

(LUNG NEOPLASMS, case reports  
multiple metastases to bones & organs)  
(BONE AND BONES, neoplasms  
metastatic from lungs)



1956/11/2, 5-10.

Name: TSEPLITS, E. E.

Dissertation: The static strength of welded seams made by the corner spot welding method

Degree: Cand Tech Sci

*Defended at*  
*Publication*  
Institution: Min Higher Education USSR, Latvian State U

Defense Date, Place: 1956, Riga

Source: Knizhnaya Letopis', No 47, 1956



TSKPELOV, N.S.; BEKMURADOV, N.

Fourth All-Union Lithological Conference. Izv. AN Turk. SSR no. 4:  
93-94 '59. (MIRA 13:8)  
(Petrology--Congresses)



YEGORUSHKIN, Vasiliy Yegorovich; KOLB, Vitaliy L'vovich; STEPURO,  
Mikhail Aleksandrovich; TSEPILOVICH, Benjamin Isaakovich;  
NEKHAY, V.T., red.; MORGUNOVA, G.M., tekhn.red.

[Mechanical engineering] Mashinovedenie. Minsk, Izd-vo M-va  
vysshego, srednego, spetsial'nogo i professional'nogo obrazova-  
niia BSSR, 1963. 554 p. (MIRA 16:6)  
(Mechanical engineering)



YEGORUSHKIN, Vasiliy Yegorovich; KOLB, Vitaliy L'vovich; STEPURE,  
Mikhail Aleksandrovich; TSEPLOVICH, Benjamin Isaakovich;  
NEKHAY, V.T., red.; MORGUNOVA, G.M., tekhn. red.

[Mechanical engineering] Mashinovedenie. Minsk, Izd-vo  
M-va vysshego, srednego spetsial'nogo i professional'nogo  
obrazovaniia BSSR, 1963. 554 p. (MIRA 16:9)  
(Mechanical engineering)



13 EPL Y 57, V. 1.

BOOK REVIEW

907/5762

Uspeniy magnitnoy gidrodinamiki i plazmy. Nizhny Novgorod, 1978.

(Problemy i magnitnoy gidrodinamiki i plazmy. Trudy Konferentsii. Seriya "Nizhny Novgorodskiy gos. univ. 1978. 345 p. Seriya sily izdaniya. 1,000 copies printed.

Sponsoring Agency: Akademiya nauk Latvyskoy SSR. Institut fiziki.

Editorial Board: D.A. Frank-Kamenetskiy, Doctor of Physics and Mathematics, Professor; A.I. Vol'pert, Doctor of Technical Sciences, Professor; I.M. Kirin, Doctor of Physics and Mathematics; V.Ya. Vol'dre, Candidate of Physics and Mathematics; V.O. Vitok, Candidate of Physics and Mathematics; Yu.M. Kravtsov, and V.Ye. Kuvshinov.

M.: A. Rylovskiy, Tech. M.: A. Klyavitskiy

PREFACE: This book is intended for physicists working in the field of magnetohydrodynamics and plasma dynamics.

CONTENTS: This volume contains the transactions of a conference held in Nizhny Novgorod, 1978, on problems in applied and theoretical magnetohydrodynamics. The objectives of the conference were to establish contact between the theoretical and applied magnetohydrodynamicists, to promote the participation of theoretical physicists in applied magnetohydrodynamics. More than 160 persons from different parts of the Soviet Union took part in the conference, and 55 papers were read. Similar conferences are to be held regularly in the future; the next such conference is scheduled to be held in Nizhny Novgorod in June 1980. In this present collection of the transactions of the conference, most of the papers and comments on papers are presented by the authors themselves in an abridged form. The book is divided into two parts: the first part deals with problems in theoretical magnetohydrodynamics and plasma dynamics, and consists of 35 articles on such aspects of the problem as the application of magnetohydrodynamics to the study of the stability of plasma in the acceleration of plasma in a magnetic field (A.V. Ginzburg and A.I. Oshapov), stability of shock waves and magnetohydrodynamics (A.I. Abrikosov). The second part, consisting of 33 articles, deals with problems of experimental magnetohydrodynamics, including the application of physical simulation for investigation of electromagnetic processes in liquid metals (I.M. Kirin) and the development of electromagnetic pumps (F.O. Kirilov), at the Institute of Physics of the Academy of Sciences, Latvian SSR. Several articles are devoted to induction pumps, electromagnetic crucibles, electromagnetic stirrers for molten metals, and their application in the metallurgical industry including schematic diagrams of their power-supply systems. References are given at the end of most of the articles.

|  |     |
|--|-----|
| Symposium, S.I. On the Stability of Shock Waves in Magnetohydrodynamics  | 127 |
| Rubins, R.V., and O.Ye. Lyubchuk. The Impossibility of Magnetic Shock Waves in Magnetohydrodynamics                                    | 132 |
| Kordonskiy, S.Y. Zemplen's Theorem in Magnetohydrodynamics   | 133 |
| Kiselev, M.I., and Y.I. Tsirlin. Oblique Shock Wave in Plasma With Finite Conductivity and Certain Other Problems in Shock-Wave Theory | 135 |
| Shubalov, V.I. Thermodynamic Equilibrium of Strong Discontinuity Surfaces  | 136 |
| Abrikosov, A.I., and A.O. Sitenko. On the Theory of Hydromagnetic Wave Excitation  | 137 |
| Merosov, A.I. Cherenkov Generation of Magnetic Sound Waves   | 141 |
| Sitenko, A.O., and Yu.A. Kirichuk. Dissipation of Hydromagnetic Waves in Turbulent Fluctuations  | 143 |
| Card 6/12  |     |



LEVIN, M.I.; SEMENOV, V.F.; TOLMAYEV, I.K.

Measuring galvanometer-type amplifier with semiconductor thermistors.  
Izm. tekhn. no. 6:40-43 Je '60. (NIIA 14:2)  
(Electric instruments)



TSEPLYAYEV, K.N.

Thermoradiation galvanometer amplifiers. Izv. tekhn. no. 3:40-44  
Mr '63. (MIRA 16:4)

(Galvanometer)



S/115/63/000/003/006/010  
E194/E455

AUTHOR: Tseplyayev, K.N.

TITLE: Thermal-radiation galvanometer amplifiers

PERIODICAL: Izmeritel'naya tekhnika, no.3, 1963, 40-44

TEXT: The principle of building a thermal-radiation galvanometer amplifier and its construction was discussed in a previous article (M.I. Levin, V.F. Semenov, K.N. Tseplyayev. Izmeritel'naya tekhnika, no.6, 1960). The design of the main units of a thermal radiation amplifier for a zero indicating galvanometer is given. In this construction a heater is firmly connected to the galvanometer moving frame and as this is displaced from the zero position it alters the heating of two semiconductor thermal resistances which form two arms of a bridge circuit, the other two arms being resistances. To ensure stability of conversion factor and to raise the output power, a d.c. amplifier or emitter repeater is connected to the output and the whole system has strong negative feedback. The relationships between the angular displacement of the heater and the output signal depend on the thermal field of the heater and on the arrangement of the heater and thermal resistances. Tests showed that the relationship between the

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S/115/63/000/003/006/010  
E194/E455

Thermal-radiation ...

thermal resistance temperature and the distance from the heater diminishes approximately exponentially, the steepness being greater with increased heater temperature. The heater must be arranged horizontally and parallel to the resistances and should be two or three times their length. They should be near the central part of the heater where the temperature is greatest; the change in temperature of the resistances is greatest when they are in a horizontal plane some 0.3 to 0.4 heater-diameters below the heater center. The influence of the properties of the resistances and heater and of the system geometry on the output are considered. The properties of various available semiconductor thermal resistances are described and type TШ-1 (TSh-1) is preferred. Tests showed that with appropriate selection of input voltage, current and bridge element characteristics, the relationship between the angular displacement of the galvanometer and the output voltage of the amplifier was approximately linear between 0 and 9 V. Stable characteristics depend upon a high output impedance and various ways of achieving this are described. Formulas are given for calculating the circuit characteristics

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Thermal-radiation ....

S/115/63/000/003/006/010  
E194/E455

and particularly the feedback for both current and voltage output characteristics. Two thermal-radiation galvanometer amplifiers were built on this design. There are 5 figures and 1 table.

Card 3/3



8(0)

AUTHORS: Yemel'yanov, N. P., Candidate of Technical Sciences, Tseplyayev, L. I., Engineer SOV/145-58-11-3/28

TITLE: Unbalanced Bridge Circuits for Measuring Corona Losses  
(Neuravnoveshennyye mostovyye skhemy dlya izmereniya poter' na koronu)

PERIODICAL: Elektrichestvo, 1958, Nr 11, pp 11 - 14 (USSR)

ABSTRACT: The main difficulty encountered in measurements of corona losses is due to the extremely low power factor of the line circuit. In the USSR four-arm bridges are more and more used for such purpose, employing a calibrated high-voltage condenser ( $C_4, R_4$ ) as one arm and the line affected with the corona losses as the other ( $C_2, R_2$ ). As the calibrated condenser operates with losses during the no-corona operation of the line, it is necessary to introduce supplementary resistances  $R_1$  and  $R_3$  into the low-voltage arms in case they are fitted with capacities, and a capacity  $C_1$  into the low-voltage arms with ohmic resistances. When corona occurs, the

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Unbalanced Bridge Circuits for Measuring Corona Losses SOV/165-27-11-1/28

bridge compensation is disturbed and hence a current flows through the diagonal (Ref 1): formula (1). This formula is simplified, yielding (2). It appears that the current in the diagonal of the bridge would be proportional, if both the active and the reactive component of the unbalance current, which is due to the circuit elements in the bridge, would be zero. It is demonstrated that the reactive component of the unbalance current never fails to occur and that hence the diagonal current is in the general case not proportional to the corona current. By a corresponding choice of the quantities A and B (see formula 2), which are dependent upon the parameters of the low-voltage arms of the bridge, it can be achieved that either the real or the imaginary component of the current in the bridge diagonal varies as the corona current. In the first case, with  $A \gg B$ , the real component will vary as the corona current, whereas in the second case, with  $A \ll B$ , this will be true of the reactive component. If  $I_{act\ unbal} = 0$  formula (2) transforms into (5).

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Unbalanced Bridge Circuits for Measuring Corona Losses SCV/105-55-11-3/28

From (5) and the same formula for  $I_{\text{react unbal}} = 0$  the error of power measurement is derived to follow equation (6) and (7). In the first case the current coil of the wattmeter is connected in the diagonal of the bridge and the voltage circuit is either connected with an additional active resistance to the full transformer voltage, or it is connected to the voltage at the tap between points 1 and 2 of the line transformer. In the second case the voltage circuit is connected in the bridge diagonal, a current proportional to the line voltage driving the current coil of the wattmeter, which, however, is shifted through an angle of  $\frac{\pi}{2}$ . The calculation of the errors by pertinent formulae occurring when an electrodynamic wattmeter or an electrostatic wattmeter is connected is presented. There are 2 figures and 2 Soviet references.

Card 3/4



Unbalanced Bridge Circuits for Measuring Corona Losses SOV/105-58-11-3/28

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut elektro-energetiki MES SSSR ( All-Union Scientific Research Institute of Electric Power of the Ministry of Power Stations, USSR)

SUBMITTED: June 24, 1958

C 4/4



AKISHIN, A.I.; ANDREYEVA, M.G.; VASIL'YEV, S.S.; ISAYEV, L.N.;  
TSEPLYAYEV, L.I.

Action of electron bombardment and glow discharge on alloyed  
secondary electron emitters. Radiotekh. i elektron. 8 no.2:  
288-293 F '63. (MIRA 16:2)  
(Cathodes) (Thermionic emission)



TSEPLYAYEV, M.

We have increased the productivity of our grain drying and cleaning tower. Muk.-elev.prom. 26 no.1:29 Ja '60. (MIRA 13:6)

1. Nachal'nik sushil'no-ochistitel'noy bashni Peskovskogo  
khlebopriyemnogo punkta Kokchetavskoy oblasti.  
(Kokchetav Province--Grain elevators)



TSEPLYAYEV, M.M.

Preventing the pulling-in of indicators in the MRShChPr-54  
measuring instruments. Izv.tekh. no.4:63 Ap '62. (MIRA 15:4)  
(Measuring instruments)



TSEPELEV, N. (Yakutsk)

In rays of the communist-youth projector. Grazhd. av. 19  
no.11:26 N '62. (MIRA 16:1)

(Communist Youth League)  
(Yakutsk—Airports)



NAUMOVICH, V.M.; GAMAYUNOV, N.I.; TSEPLYAYEV, O.A.

Hot pressing of peat under vacuum. Inzh.-fiz. zhur. no.12:  
107-110 D '63. (MIRA 17:2)

1. Torfyanoy institut, Kalinin.



TSEPLYAYEV, O.A., inzh.

Peat compression under vacuum. Torf. prom. 40 no.6:15-18 '63.  
(MIRA 16:10)

1. Kalininskiy torfyanoy institut.



BULYNKO, M.G.; TSEPLYAYEV, O.A.

Manufacture of strong briquets from the lignin of cotton hulls.  
Gidroliz. i lesokhim. prom. 16 no.6:12-13 '63. (MIRA 16:10)

1. Kalininskiy torfyanoy institut.



L 34086-66

ACC NR: AP6025521

SOURCE CODE: UR/0069/66/028/002/0191/0197

AUTHOR: Bulychev, V. G.; Gamayunov, N. I.; Tseplyayev, O. A.

ORG: Kalinin Polytechnic Institute (Kalininskiy politekhnicheskiy institut)

TITLE: Role of air in the pressing of hydrophilic powdered fuel

SOURCE: Kolloidnyy zhurnal, v. 28, no. 2, 1966, 191-197

TOPIC TAGS: solid fuel, vacuum technique, adsorption, air, pressure effect

ABSTRACT: Two successive processes develop in the vacuum pressing of peat dessicate -- strengthening of briquettes through decreased adsorption of air as the vacuum becomes higher, and drop in briquette strength due to entry of atmospheric air into the vacuum press mold. The optimal vacuum is determined by these processes and is due to intensity of strengthening and sorptional decrease in strength, which for their part depend on the briquette material and pressing conditions. Consequently, the optimal vacuum depends on the same factors as does the mechanical strength of briquettes. Air sorbed on solid and quasi-solid peat components is a deleterious agent in briquetting and must be eliminated. Achieving a vacuum of the order of  $4 \cdot 10^{-4}$  normal atmosphere/meter<sup>2</sup> in the pressing chamber results in up to 60% increase in mechanical strength of briquettes. When there is equal strength in vacuumed and ordinary briquettes, pressure can be reduced by approximately one-half or the pressing time can be cut down to one-fifth one-eighth. Orig. art. has: 5 figures. [JPRS: 35,998]

SUB CODE: 21, 13, 07 / SUBM DATE: 29Jan65 / ORIG REF: 035

Card 1/1

UDC: 541.182.6:52.577

0916 0403



TSEPLYAYEV, V. inzh.

Water diluted emulsions for paints, Biul. tekhn. inform. 4 no.3:27  
Mr '58. (MIRA 11:3)

(Paint mixing)



TSEPLYAYEV, V.I.

Equations for the correlation functions of a system of short-range Coulomb particles in equilibrium. Dokl. AN SSSR 143  
no.4:829-831 Ap '62. (MIRA 15:3)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.  
Predstavleno akademikom N.N.Bogolyubovym.  
(Statistical mechanics)



TSEPLYAYEV, V.I.

Isothermal jump in magnetohydrodynamics. Zhur. eksp. i teor. fiz.  
38 no.1:255-256 Jan '60. (MIRA 14:9)

1. Moskovskiy gosudarstvennyy universitet.  
(Magnatohydrodynamics)



S/020/62/143/004/013/027  
B104/B102

24.6/60

AUTHOR:

Tsepilyayev, V. I.

TITLE:

Equations for the correlation function of an equilibrium system of Coulomb particles with short-range order

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 4, 1962, 829 - 831

TEXT: A calculation method of the short-range repulsion forces of a classical system of Coulomb particles in thermodynamic equilibrium is suggested. Equations for the different order corrections to the effective interaction energies of two, three and more particles are derived. These equations, for instance, allow calculation of the corrections to a Debye potential. Attempt is made to explain the meaning of a Kramers type potential which is often used in investigations of Coulomb particle systems. Thanks are due to K. P. Stanyukovich and Yu. L. Klimantovich for discussions. ✓e

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

Card 1/2



S/020/62/143/004/013/027  
B104/B102

Equations for the ...

PRESENTED: November 15, 1961, by N. N. Bogolyubov, Academician

SUBMITTED: November 14, 1961

Card 2/2



AUTHORS: Kiselev, M. I., Tsepilyayev, V. I. SOV/56-34-6-29/51

TITLE: Inclined Shock Waves in a Plasma With Finite Conductivity  
(Naklonnyye udarnyye volny v plazme s konechnoy provodimost'yu)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol. 34, Nr 6, pp. 1605-1609 (USSR)

ABSTRACT: This paper investigates the structure of the front of an inclined shock wave for arbitrary orientations of the field before the front in a plasma with finite conductivity. This plasma is assumed to have a constant and isotropic conductivity  $\sigma$  which is high enough for the displacement current to be neglected. The authors obtain the conditions for the possibility of neglecting the kinematic viscosity  $\nu$  and the thermal conductivity due to the electrons  $\kappa$ . ( $\nu$  and  $\kappa$  are neglected with respect to the magnetic viscosity  $\nu_m$  in the system of the equations of magnetic hydrodynamics).<sup>m</sup> This condition  $\nu_m \gg \nu$  is specialized also for a special case. Then the authors give the particular integrals of the equations of magnetic hydrodynamics. The second part of this paper deals

Card 1/2



SOV/56-34-6-29/51

Inclined Shock Waves in a Plasma With Finite Conductivity

with the structure of an inclined shock wave in a plasma with finite conductivity. The above mentioned particular integrals of motion are specialized to this case. One integral is computed numerically and an expression is obtained for the breadth of the front. The last part of this paper calculates the limit angle of the propagation of the inclined shock wave in a plasma with infinite conductivity. The boundary conditions are given also for this case. In the presence of a magnetic field, the above mentioned limit angle is larger than in the case where there is no magnetic field. The author thanks K. P. Stanyukovich who proposed this problem and was constantly interested in this paper. There are 2 figures and 4 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: January 20, 1958

Card 2/2



ZHUKOV, Anatoliy Borisovich; ~~TSEPLYAYEV~~, Vasilii Petrovich; KOVALIN, D.T.,  
redaktor; SHAKHOVA, L.I., redaktor izdatel'stva; KOLESNIKOVA, A.P.,  
tekhnicheskii redaktor

[The Fourth World Forestry Congress and the forestry of India] IV  
Mirovoi lesnoi kongress i lesnoe khoziaistvo Indii. Moskva, Gosles-  
bumizdat, 1956. 117 p. (MIRA 9:10)

(Dehra Dun, India--Forests and forestry--Congresses)  
(India--Forests and forestry)



*TSEPLYAYEV, VASILY PETROVICH*  
TIMOFEYEV, Vladimir Petrovich; TISHCHENKOV, Ivan Antonovich; TSEPLYAYEV  
Vasiliy Petrovich; SHINEV, Ivan Semenovich; ZHUKOV, A.B., red.;  
SHAKHOVA, L.I., red.izd-va; BRATISHKO, L.V., tekhn.red.

[Forestry in Great Britain] Lesnoe khoziaistvo Velikobritanii.  
Moskva, Goslesbumizdat, 1957. 53 p. (MIRA 11:1)  
(Great Britain--Forests and forestry)



BOVIN, A.I., obshchiy red.; TSEPLYAYEV, V.P., obshchiy red.; KOVALIN,  
D.T., obshchiy red.

[Forestry in the U.S.S.R., 1917-1957] Lesnoe khoziaistvo SSSR,  
1917-1957. Moskva, Goslesbumizdat, 1958. 274 p. (MIRA 13:1)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye lesnogo  
khozyaystva i polezashchitnogo lesorazvedeniya.  
(Forests and forestry)



FORESTRY, 1957-1958

"Forestry Development In The USSR"

report to be submitted for the Fifth World Forestry Congress, Seattle, Washington,  
29-10 Sep 60

Deputy Head, Forestry & Protective Afforestation Inspectorate, Ministry of  
Agriculture USSR, Moscow.



TSEPLYAYEV, Vasilii Petrovich; BREDIKHIN, A.M., red.; BALLOD, A.I.,  
tekhn. red.

[Forests of the U.S.S.R.; economic features] Lesa SSSR; kho-  
ziaistvennaia kharakteristika. Moskva, Gos. izd-vo sel'khoz.  
lit-ry, 1961. 455 p. (MIRA 14:5)  
(Forests and forestry--Economic aspects)



PRISELKOV, Yu.A.; SAPOZHNIKOV, Yu.A.; TSEPLYAYEVA, A.V.

Measurement of the vapor pressure by the Knudsen method. Vest.  
Mosk. un. Ser. 2: Khim. 19 no.5:74-76 9-0 '64.

(MIRA 17:11)

1. Kafedra radiokhimii Moskovskogo universiteta.



S/189/60/000/005/003/006  
B110/B217

AUTHORS: Tseplyayeva, A. V., Priselkov, Yu. A., Karelin, V. V.  
TITLE: Measurement of the pressure of saturated silicon vapor  
PERIODICAL: Vestnik Moskovskogo universiteta. Seriya 2, khimiya, no. 5,  
1960, 36-38

TEXT: At present the physico-chemical properties of semiconductors are extremely interesting. The present study deals with pressure measurement of saturated silicon vapor and the calculation of its heat of sublimation. It is possible that the values determined by means of the boiling point and jet method are unreliable due to inaccurate determination of the beginning of boiling. The mass spectroscopic determination of the pressure of saturated vapor, as well as that of molecular composition and the heat of sublimation by R. E. Honig (Refs. 4 and 5, see below) led to the conclusion that Si vapor is monatomic and the amount of  $\text{Si}_2 \dots \text{Si}_7$  molecules by two orders of magnitude lower. The inadequate method of measurement leaves doubts as to the correctness of the results. Knudsen's effusion method was used in an apparatus with high-frequency heating to render the data more precise; this

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S/189/60/000/005/003/006  
B110/B217

Measurement of ...

apparatus is described in (Ref. 7: Yu. A. Priselkov et al.: Izv. AN SSSR, otd. tekhn. nauk; Metallurgiya i toplivo No 1, 106, 1959). Pure Si (99.95%) was used for this purpose. The molybdenum vessel and -diaphragm were degasified in vacuum at 1500-1800°C. The considerably lower vapor pressure of the molybdenum silicide thus formed has no effect upon determination. The ratio between the evaporation surface of the substance and the surface of the effusion opening (diameter = 0.173) should be at least 800. In the above experiment it was 22600. The water-cooled quartz receiver was previously heated to 100-150°C and protected with a layer of fluoroplast. The sublimated Si was dissolved in 10 ml of hot KOH (1:5) and 5 ml water. It was calorimetrically determined by the method described (Ref. 8: Yu. I. Usatenko et al.: Zavod. Lab., 15, 11, 1949) (Ref. 9: A. I. Ul'yanov: ibid. 19, 1154, 1953) which bases upon the formation of the blue silicon-molybdenum complex. Table 1 shows the results obtained. Proceeding from Honig's assumption of the monatomic character of Si vapor, vapor pressure and sublimation pressure were calculated. To determine the sublimation heat at 0°K, the thermodynamic potential for gas- and condensed phases  $\phi_g$  and  $\phi_K$  were used, which had been determined in the IGI AN SSSR (Institute of Mineral Fuels of AS SSSR). The following equation was derived:

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S/189/60/000/005/003/006  
B110/B217

Measurement of ...

$\log p = 9.602 - 18558/T$ , where  $p$  = pressure in mm Hg. The values obtained were in agreement with previously published data (Ref. 2: O. Ruff et al.: Z. Elektrochem. 32, 515, 1926) (Ref. 3: E. Baur et al.: Helv. chim. acta, 17, 959, 1934) differed, however, from Honig's values, since the latter carried out evaporation with exposed surface. If  $\alpha < 1$ , the pressure is lower than the real pressure. In the present study, the maximum relative error ( $\delta_p$ ) for the pressure was 18.65%, for  $\Delta H_o^o(\delta \Delta H_o^o)$ , 1.6%. Thus,  $\Delta H_o^o = 90.6 \pm 1.5$  kcal/mole was obtained for the standard sublimation heat at 0°K. There are 1 figure, 2 tables, and 9 references: 3 Soviet-bloc and 6 non-Soviet-bloc. The two references to English-language publications read as follows: Ref. 4: R. E. Honig: J. Chem. Phys., 22, 1610, 1954; Ref. 5: R. E. Honig: RCA Rev. a technical Journ., 28, 195, 1957.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
Kafedra radiokhimii (Moscow State University imeni M. V. Lomonosov Department of Radiochemistry)

SUBMITTED: December 18, 1959

Card 3/5



S/189/60/000/005/003/006  
B110/B217

Measurement of ...

Legend to Table 1: Evaporation rate of crystalline Si. 1) temperature; 2) amount of evaporated Si in g; 3) time of exposure,  $\tau$ , sec.; 4) Evaporation rate (G),  $\text{g}/\text{cm}^2 \cdot \text{sec}$ .

TABLE 1

Таблица 1

Скорость испарения кристаллического кремния

| 1 Температура      |                    | 2 Количество испарившегося кремния ( $\text{g} \cdot 10^3$ ), г | 3 Время экспозиции $\tau$ , сек. | 4 Скорость испарения (G), $\text{g}/\text{cm}^2 \cdot \text{сек}$ |
|--------------------|--------------------|---|----------------------------------|---|
| $^{\circ}\text{C}$ | $^{\circ}\text{K}$ |   |                                  |   |
| 1212               | 1485               | 26  | 1620                             | 1,157   |
| 1220               | 1493               | 24  | 14400                            | 1,202   |
| 1240               | 1513               | 25  | 1080                             | 1,669   |
| 1250               | 1523               | 26  | 9000                             | 2,083   |
| 1260               | 1533               | 26  | 9000                             | 2,083   |
| 1282               | 1555               | 34  | 7200                             | 3,405   |
| 1302               | 1575               | 39  | 5400                             | 5,207   |
| 1320               | 1593               | 39  | 3600                             | 7,811   |

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S/189/60/000/005/003/006  
B110/B217

Measurement of ...

Legend to Table 2: Pressure of saturated vapor and evaporation heat of monatomic Si. 1) temperature, 2) Si vapor pressure,  $p \cdot 10^3$  mm Hg, 3) heat of sublimation of Si  $\Delta H_0^\circ$  cal/mole, 4) cal/mole, 5) mm Hg, 6) mean value.

| 1 Температура, °K  | 2 $\frac{1}{T} \cdot 10^4$ | 3 Давление пара кремния, $p \cdot 10^3$ мм рт. ст. | 4 $-\lg p$ , мм рт. ст. | 5 Теплота сублимации кремния $\Delta H_0^\circ$ , кал/моль | 6 $\Delta H_0^\circ$ , кал/моль |
|--|----------------------------|--|-------------------------|--|---------------------------------|
| 1485   | 6,734                      | 1,435  | 2,8431                  | 90 093   | -512                            |
| 1493   | 6,698                      | 1,502  | 2,8233                  | 90 442   | -163                            |
| 1513   | 6,609                      | 2,100  | 2,6778                  | 90 642   | + 37                            |
| 1523   | 6,566                      | 2,629  | 2,5802                  | 90 559   | - 46                            |
| 1533   | 6,523                      | 2,637  | 2,5627                  | 91 030   | +425                            |
| 1555   | 6,431                      | 4,342  | 2,3623                  | 90 905   | +300                            |
| 1575   | 6,349                      | 6,683  | 2,1750                  | 90 720   | +115                            |
| 1593   | 6,277                      | 10,082   | 1,9965                  | 90 454   | -151                            |
| <div> <div>6 Среднее 90 605</div> <div>6 Среднее +219</div> </div> |                            |  |                         |  |                                 |

Card 5/5



1. The first part of the document is a list of the names of the persons who were present at the meeting. The names are listed in alphabetical order. The names are: [illegible]

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L 10677-85

ACCESSION NR: A4647646

where  $\Omega$  is the solid angle within which the molecules of the test substance fall directly from the recess of the chamber upon the detector. The remaining symbols are standard. Orig. art. has: 2 figures and 1 formula.

ASSOCIATE: Moscow State University (Moscow, U.S.S.R.)

Chemical Physics

SUBJECT: MM  
Card 2/2



TSEFLYAYEVA, A.V.; PRISEIKOV, Yu.A.; KARELIN, V.V.

Measurement of the saturated vapor pressure of silicon. Vest. Mosk.  
un. Ser. 2: Khim. 15 no.5:36-38 8-0 '60. (MIRA 13:11)

1. Moskovskiy gosudarstvennyy universitet, kafedra radiokhimi.  
(Silicon) (Vapor pressure)



PRISELKOY, Yu.A. (Moskva); SAPOZHNIKOV, Yu.A. (Moskva); TSEPLYAYEVA, A.V.  
(Moskva)

Pressure of saturated aluminum vapor. Izv. AN SSSR. Otd. tekhn. nauk  
Met. i topl. no. 1:106-109 Ja-F '59. (MIRA 12:6)  
(Vapor pressure) (Aluminum)



AUTHORS: Priselkov, Yu.A., Sapozhnikov, Yu.A. and Tseplyayeva, A.V. <sup>SOV/180 -59-1-20/29</sup>  
(Moscow)

TITLE: Pressure of Saturated Aluminium Vapour (Davleniye  
nasyshchennogo para alyuminiya)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh  
nauk, Metallurgiya i toplivo, 1959, Nr 1, pp 106-109 (USSR)

ABSTRACT: The authors describe their measurements of the pressure  
of saturated aluminium vapour in the range 1273-1473°K  
by an integral variant of the effusion method. 99.998%  
pure aluminium was used. The apparatus (Fig 1) was of a  
continuous-action type with the special feature of a  
high-vacuum valve which enables the vapour-receiver to  
be replaced without disturbing the vacuum or stopping the  
heating. In the effusion chamber (Fig 2) evaporation of  
aluminium was effected in a beryllium-oxide crucible  
covered with a refractory disc (ground to fit and pressed  
down by the force of springs) with the effusion aperture.  
The crucible was contained in a massive molybdenum block  
and heated by high-frequency currents. Measures were  
taken to secure temperature uniformity and to minimise  
the effect of the h.f. on the effusion process.  
Card 1/2 Temperatures were measured with thermocouples calibrated



Pressure of Saturated Aluminium Vapour S07/180-59-1-20/29

by placing metals of known melting point in the crucible. From the results (Table) it was found by the method of least squares that the logarithm of the vapour pressure (mm Hg) is equal to  $9.2776 - 16079/T$ , where T is the absolute temperature in °K. These results were in good agreement with those of other workers (Refs 1 and 2). The calculated value of the standard heat of evaporation was  $74720 \pm 310$  cal/mole. The author has also calculated the degree of dissociation of the vapour for each experiment (Table), the mean value being 0.976.

Card 2/2 There are 3 figures, 1 table and 4 references, 3 of which are English and 1 German.

SUBMITTED: July 31, 1958



PRISELKOV, Yu.A.; SAPOZHNIKOV, Yu.A.; TSEPLYAYEVA, A.V.; KARELIN, V.V.

On the accuracy of the effusion method. Determination of indium  
saturated vapor pressure. Izv.vys.ucheb.zav.;khim. i khim.tekh.  
3 no.3:447-451 '60. (MIRA 14:9)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova,  
kafedra neorganicheskoy khimii.  
(Indium) (Vapor pressure)



TSEPLYAYEVA, A.V.; PRIGELKOV, Yu.A.

Effect of germanium radioactivity on its evaporation. Vest. Mosk. un.  
Ser. 2; Khim. 20 no.2:54-55 Mr-Apr '65. (MIRA 18:7)

1. Kafedra radiokhimii Moskovskogo universiteta.



S/032/60/026/011/024/035  
B004/B067

AUTHORS: Kifer, I. I. and Tseplyayeva, M. S.

TITLE: Determination of the Characteristic Values of Cores of  
Ferroprobes for Use in Magnetic Defectoscopy

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 11, pp. 1298-1301

TEXT: The authors explain that the magnetization curve is not sufficient for determining the characteristic values of cores of probes for use in magnetic defectoscopy. The dependence of the maximum induction  $B_{2m}$  of the second harmonic on the voltage  $H_m$  of the exciting alternating field with a constant value of the constant field  $H_0$  and, conversely, the function  $B_{2m}(H_0)_{H_m=const}$  are characteristic of the core material of the probe. ✓

Two circuits were designed for measuring the  $B_{2m}$  values. 1) For frequencies up to 2 kc/sec with two T-shaped RC bridges, a 28MM (28IM) amplifier, and a phase-shifting bridge; 2) for frequencies up to 100 kc/sec an LC resonant


Card 1/2



Determination of the Characteristic Values of Cores of Ferroprobes for Use in Magnetic Defectoscopy S/032/60/026/011/024/035  
B004/B067

circuit with an *МВЛ-2М* (MVL-2M) electron voltmeter. 80 HxC (80 NkHs) perm. alloy probes were tested at 15, 30, 50, and 100 kc/sec. There are 4 figures and 3 Soviet references.

ASSOCIATION: *Московский энергетический институт*  
(Moscow Institute of Power Engineering)



Card 2/2



TSEPLYAYEVA, M.S.

Magnetic probe testing of pipes made from low-carbon steel. Zav.  
lab. 30 no.3:309-310 '64. (MIRA 17:4)

1. Moskovskiy energeticheskiy institut.



KIFER, I.I.; TSEPLYAYEVA, M.S.

Design of ferromagnetic probes for magnetic defectoscopy.  
Zav. lab. 29 no.6:725-730 '63. (MIRA 16:6)

1. Moskovskiy energeticheskiy institut.  
(Magnetic testing)



Country : USSR

Category: Forestry. Forest Cultures.

K

Abs Jour: RZhBiol., No 11, 1958, No 48805

Author : Sulkhanov, I.P.; Tseplyayev, I.P.

Inst : -

Title : A Hundred-Year Experiment in Forest Cultivation in  
the Khrenov Pine Forest.

Orig Pub: Lesn. kh-vo, 1957, No 11, 39-45

Abstract: No abstract.

Card : 1/1







68695

5.2400(A)

S/180/60/000/01/019/027  
E071/E135

AUTHORS: Priselkov, Yu.A., Sapozhnikov, Yu.A., and  
Tsepilyayeva, A.V. (Moscow) 1

TITLE: Measurement of Saturated Vapour Pressure of Boron 21

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1960, Nr 1, pp 134-137 (USSR)

ABSTRACT: The results of measurement of vapour pressure of boron within temperature range 1651-1764 °K by the effusion method are reported. The experimental method and apparatus used were described previously (Refs 1-5). Specimens of boron were of 99.42% purity and contained less than 0.16% of hydrogen. The evaporation was done from a molybdenum vessel covered with a diaphragm from molybdenum or tantalum. The diameter of the effusion hole was varied from 0.09 to 3.1 mm. The experimental results are given in Table 1. The vapour pressure and heat of sublimation (Table 2) were calculated by the usual method (Ref 7) assuming that boron in the vapour phase is monoatomic. The vapour pressure was found to be dependent on the ratio  $S/K\sigma$  (the ratio of the evaporation surface  $S$  to the product of the surface

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## Measurement of Saturated Vapour Pressure of Boron

area of the effusion hole  $\sigma$  and the Klausung coefficient  $K$ ). It is pointed out that despite a preliminary saturation with boron of internal surfaces of the holding vessel and diaphragm by preheating to a temperature above that at which the determination was carried out, some part of the boron vapour was probably irreversibly absorbed by the internal surface so that the equilibrium in the system was not completely established. Therefore, the results for boron vapour pressure may be somewhat lower. The dependence of  $\Delta H_{\text{O}}^{\circ}$  on  $S/K\sigma$  is shown in the Figure. The authors consider that the determinations of Searcy and Myers (Ref 1) are less accurate than their own. Heat of sublimation of boron is considered to be  $101 \pm 2$  kcal/mol (at 0 °K).

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There are 1 figure, 2 tables and 9 references, of which 6 are English and 3 Soviet.

SUBMITTED: November 27, 1959



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Design of magnetic modulation transducers. Trudy MEI no.49:  
85-95 '63. (MIRA 17:3)



LYUBIMOV, V.I.; TSEPLYAYEVA, Z.S.

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Biokhimiia 25 no.5:974-976 9-0 '60. (MIRA 14:1)  
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The two largest abstract journals of biological chemistry.  
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Estimating the preceding development of atmospheric processes  
and distribution of weather elements in the preparation of  
monthly weather forecasts. Trudy TSIP no.71:44-47 '58.

(MIRA 11:12)

(Weather forecasting)



TSEPKANOVA, Ye.I.; UR'YVA, B.R.

Forecasting general characteristics of weather for a month.  
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YEMEL'YANOV, N.P., kand. tekhn. nauk; TSEPLAYAEV, L.I., inzh.

Unbalanced bridge circuits for measuring corona losses.  
Elektrichestvo no.11:11-14 N '58. (MIRA 11:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektroenergetiki.  
Ministerstva elektrostantsiy SSSR.  
(Corona (Electricity))



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S/144/62/000/006/009/009  
D230/D308

AUTHORS: Kifer, I.I., Candidate of Technical Sciences, Docent,  
and Tseplyayeva, M.S., Engineer, Assistant

TITLE: Choice of the field excitation frequency of ferro-  
sondes used in magnetic defectoscopy

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Elektro-  
mekhanika, no. 6, 1962, 687-689

TEXT: The sensitivity of ferrosondes operating on the prin-  
ciple of frequency doubling is determined by the ratio of the second  
harmonic emf to the intensity of the magnetic field. The relation  
between the sensitivity and the frequency is found from the ratio of  
the core magnetic permeability  $\mu$  and the form permeability  $m$ . For  
 $m \ll \mu$  the sensitivity of the ferrosondes is almost proportional  
to the frequency; similarly, the frequency increase causes a time  
decrease in the active core section and an increase of the form per-  
meability. The form permeability increases with frequency; the ra-  
tio between  $\mu$  and  $m$  varies for each definite core dimension and,

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Choice of the field ...

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starting with a given limit frequency, the sensitivity increases rather less than the excitation current frequency of the ferrosondes. In the case of short ferrosonde cores (3-7 mm), the condition  $\mu \gg m$  holds for large frequency changes. The excitation current frequency for those sondes can be increased to a few kc/s. Increasing the value  $\lambda = l/d$ , where  $l, d$  - length and diameter of the core, respectively, the upper frequency limit for which the sensitivity varies linearly with frequency, decreases. For sondes with large  $\lambda$  values used in geophysical measurements, the optimum working excitation current frequency is below 10 kc/s. These results are valid for ferrosondes made of any permalloy material whose initial permeability  $\mu_a > 5000 - 10,000$ . There is 1 table.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Institute of Power Engineering)

SUBMITTED: April 5, 1961

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KIFER, I.I.; TSEPLYAYEVA, M.S.; SHATUNOVSKIY, V.L.

Electrical equilibration of ferromagnetic probes for magnetic  
flaw detection. Zav.lab. 28 no.1:105-107 '62.

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1. Moskovskiy energeticheskiy institut.  
(Magnetic testing)



KIFER, I. I.; TSEPLYAYEVA, M. S.

Determination of the characteristics of ferromagnetic sonde cores  
for magnetic flaw detection. Zav. lab. 26 no. 11: 1298-1301 '60.  
(MIRA 13:11)

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Magnetic characteristics of materials operating in difficult  
conditions of magnetization. Trudy inst. Kom.stand, ser 1 izm.  
prib no.64:168-171 '62. (MIRA 16:5)  
(Ferromagnetism) (Magnetization)



KIFER, Isaak Iosifovich, kand. tekhn. nauk, dotsent; TSEPLYAYEVA,  
Marianna Samuilovna, inzh., assistant

Concerning the choice of field excitation frequency ferrite  
probes used in magnetic flaw detection. Izv. vys. ucheb. zav.;  
elektromekh. 5 no.6:687-689 '62. (MIRA 15:10)

1. Kafedra obshchey elektrotekhniki Moskovskogo energeticheskogo  
instituta.

(Magnetic measurements) (Transducers)



TSEPLYAYEVA, Z. S.

SUNDUK'YAN, G.S.; BOYARINOV, A.K., redsenzent; STARIKOV, A.Ya., redsenzent;  
SIDOROV, A.G., redaktor; TSEPLYAYEVA, Z.S., redaktor; LABUS, G.A.,  
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[Warehouse economy and principles of storing crude hides and furs]  
Skladskoe khoziaistvo i osnovy khraneniia zhivotnovodcheskogo syr'ia  
i pushniny. Moskva, Gos. izd-vo tekhn. i ekon. lit-ry po voprosam  
zagotovok, 1953. 275 p. (MLRA 10:1)  
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